

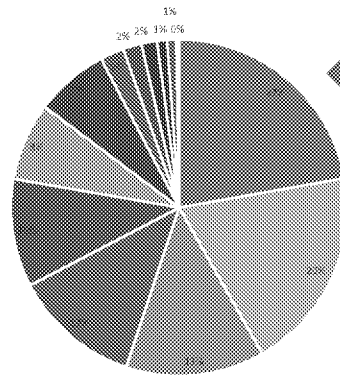
ADEC, NYSDEC, NESCAUM
EPA OECA and OAQPS Briefing

Review of EPA Certified Test Reports for Residential Wood Heaters

Presented
October 22, 2020

PM_{2.5} Emissions by Source Category

- Residential Wood Heating
- Other Industrial Processes
- Waste Disposal & Recycling
- Fuel Comb. Industrial
- Off-Highway
- Highway Vehicles
- Fuel Comb. Elec. Util.
- Metals Processing
- Fuel Comb. Other - w/out RWH
- Petroleum & Related Industries
- Chemical & Allied Product Mfg
- Storage & Transport
- Solvent Utilization



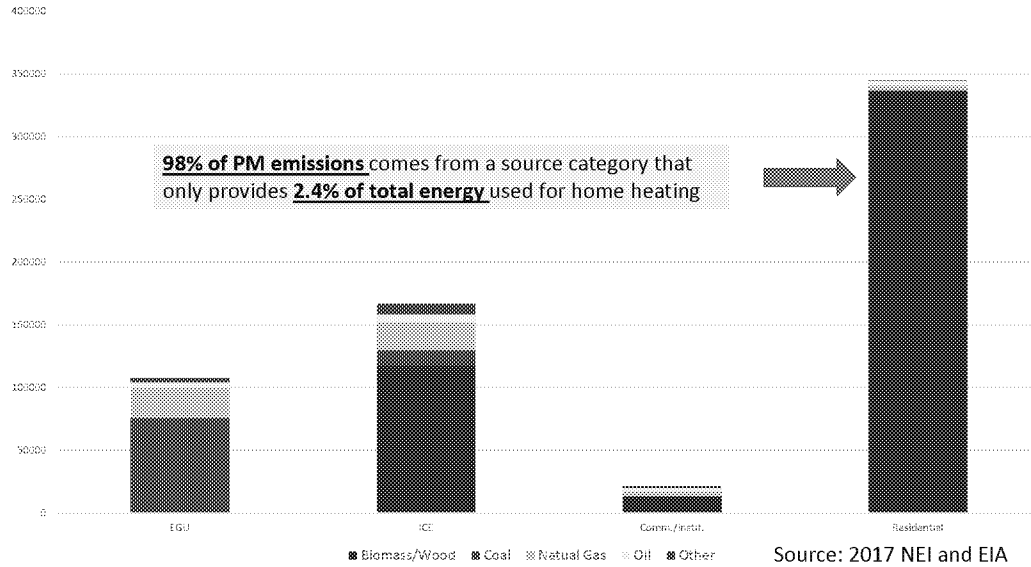
- Wood Heating is one of the last opportunities for significant PM reductions from stationary sources.
- Only fires and dust contribute larger amounts of direct PM_{2.5} than Residential Wood Heating Sector

Source: 2017 NEI Data

ADEC, NESCAUM, NYSDOE EPA Briefing 10/22/2020

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Fuel Combustion PM_{2.5} Emissions by Sector - TPY



ADEC, NYSOEC, NYSDEC EPA Briefing 10/22/2020

Concerns about ISO and EPA Program Integrity

Review Based on EPA Requirements

- Reports reviewed
 - 223 stove reports reviewed
 - 23 central heating reports reviewed
- 0 test reports publicly posted were complete
 - OECA staff stated they reviewed non-CBI reports prior to postings
- 72% of reports raised issues that appear to trigger revocation elements in NSPS
 - Failure to follow test method procedures
 - Manufacturer materials contradict test report data
 - Non-representative testing
 - Negative PM emission rates
- 24% of the reports pending determinations due to incomplete test reports
- 4% of the reports had minor issues only
- Significant data without based on claims for data explicitly identified as non-CBI based on rule language

Based on initial reviews completed on 9/1/2020. As ADEC receives additional information, these statistics may change

ADEC List

- Denied reports – 65
- Remaining reports incomplete – 159; Complete reports - 0
- Inaccurate data found – 59
- # flagged issues in test reports
 - Average 21.13 issues identified per test report – cordwood stoves
 - Average 16.5 issues identified per test report – pellet stoves
- All reports (224) had deficiencies
- Several manufacturers do not provide public access to reports, requires obtaining link from OECA.
- Devices with more than one test.
- Some manufacturers didn't modify the unit, rather modified how they fueled the unit for certification testing.
- Some reports appear to 'cherry pick' results from multiple test runs
- Deficiencies easy to find
- Did not conduct in-depth review, full review likely reveal additional issues.

**Solutions require action
from
both
OECA & OAQPS**

OECA: Conduct Meaningful Enforcement Activities

Immediate Activity

1. Identify 23 stoves (10% of stoves with test reports) to undergo compliance audits as allowed per §60.533(n)*, targeting stoves that conducted non-representative testing per ADEC review sheets. Continue to audit 10% of stoves every year for the foreseeable future.

Short-Term Activity

1. Take enforcement action under 40 CFR 50.535(b) against labs that failed to follow required procedures or practices.
2. Revoke certification of appliances that violated 40 CFR 50.533(l) elements, as identified by ADEC review.
3. Take enforcement action against third-party certifiers that have not adhered to method and rule requirements.
4. Develop strategy and action plan to ensure all manufacturers post complete non-CBI test reports. Take enforcement action against all manufacturers who post incomplete non-CBI test reports, as defined by the rule.
5. EPA should coordinate meeting with ISO accreditation bodies to discuss NESCAUM and ADEC report findings highlighting ISO accredited labs' failures to follow procedures and ISO third-party certifiers' failures to identify and report testing deficiencies. Request revision to ISO procedures to assure integrity and competence in the certification system. Provide transparency to state and local agencies on these activities.

Long-Term Activity

1. Improve staff capacity and expertise on rule and test method requirements.
2. Post full test reports and make those reports accessible via ECHO.
3. Require capacity for regulatory staff to remotely witness testing.
4. Restructure ISO process:
 - Eliminate confidentiality of ISO compliance assurance audits and post audit findings on ECHO.
 - Eliminate labs that conduct certification testing from the third-party review process.

* §60.533(n) grants broad authority to OECA to require audit testing at no cost to EPA and does not require a triggering activity.

OAQPS: Eliminate/Modify Problematic Test Methods & Improve Lab Competency

Immediate Activity

1. Revoke broadly applicable test method ASTM 3053.

Short-Term Activity

1. Expedite rulemaking or guidance to close loopholes and reduce deficiencies in ASTM & CSA test methods.
 - Eliminate provisions that allow units to conduct multiple test runs and exclude valid test runs that allow units to test until they pass.
 - Eliminate allowances for labs to age/condition appliances. Manufacturers must age at another facility without lab staff present.
 - Eliminate allowance to test outside of lab facility.
 - Eliminate provisions that reduce method precision.
2. Take action to assure lab independence and competence. Address concerns regarding activities in reports that suggest labs have engaged in activities such as inappropriate activity between labs and manufacturers, labs efforts to "optimize" test results, and modification of appliance during testing. Communicate concerns and initiate actions against non-compliant labs.
3. Develop and require use of standardized certification report template.

Long-Term Activity

1. Fully fund development of new test methods and eliminate use of ASTM and CSA methods in future rulemakings.
2. Assess current regulatory structure to determine if lab independence is possible and consider replacing with single national certification testing lab.